

Application Serial No.: 10/500,860
Reply to Office Action dated July 22, 2005

IN THE DRAWINGS

The attached sheets of drawings include changes to Fig. 2-5. These sheets, which include Fig. 2-5, replace the original sheets including Fig. 2-5.

Attachment: Replacement Sheets

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5 are presently active in this case, Claims 1, 3, and 5 having been amended by way of the present Amendment.

In the outstanding Official Action, the drawings were objected to because the drawings contain cross hatching used for the housing that represents metal, rather than resin. Submitted concurrently herewith are Replacement Sheets that include changes to Figures 2-5 to address the objections. Accordingly, the Applicants request the withdrawal of the objection to the drawings.

The abstract of the disclosure was objected to because of minor informalities. Accordingly, the Abstract has been amended to remove the reference numerals. Accordingly, the Applicants request the withdrawal of the objection to the abstract.

The disclosure was objected to for minor informalities. Accordingly, the specification has been amended as suggested. The Applicants therefore request the withdrawal of the objection to the disclosure.

The title was objected to for being repetitious. Accordingly, the title has been amended as suggested. The Applicants therefore request the withdrawal of the objection to the title.

Claim 1 was objected to for minor informalities. Claim 1 has been amended to overcome the informalities. Accordingly, the Applicants respectfully request the withdrawal of the claim objection.

Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Black et al. (U.S. Patent No. 3,697,933). For the reasons discussed below, the Applicants request the withdrawal of the anticipation rejection of Claim 1.

In the Office Action, the Black et al. reference is indicated as anticipating Claim 1. However, the Applicants note that a claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). As will be demonstrated below, the Black et al. reference clearly does not meet each and every limitation of independent Claim 1.

Claim 1 of the present application advantageously recites an electric connector for boards, comprising, among other features, a housing including a connecting recess opened in a connecting direction, where the housing further includes a pair of opposed side walls extending laterally so as to define a connecting recess therebetween, plural partition walls for separating adjacent terminal retainer recesses from each other, and plural openings formed in outer side surfaces of both of the pair of opposed side walls, corresponding to respective partition walls, wherein, through each opening of the plural openings, a pair of the terminal retainer recesses adjacent to each other via one of the partition walls corresponding to the opening are opened to the exterior of housing. The Applicants submit that the Black et al.

reference does not disclose openings formed in outer side surfaces of both of a pair of opposed side walls, in the manner recited in Claim 1.

The Black et al. reference describes a two row connector block for mounting a circuit board with two rows of female terminals extending parallel to the circuit board. (See the Abstract.) The connector block (10) includes an elongate molded housing (12) having a top face (14), a bottom face (16), a front face (18), and a back face (20). The housing (12) has a first row (22) of terminal receiving cavities (24) extending along the front face (18), and a second row (36) of terminal cavities located above the first row (22) on the front face (18). The housing (12) also includes windows (56) that on the top face (14) and communicate between adjacent terminal cavities (38) and extend longitudinally into the cavities to a slight extent. The bottom face (16) is provided upon the circuit board (66).

The Black et al. reference provides a connector block configuration in which windows (56) are only provided on a single face, namely the top face (14). In fact, the provision of windows, such as windows (56), on the bottom face (16) are not taught, and would not even be suggested, by the connector block configuration depicted and described in the Black et al. reference. Thus, the Black et al. reference does not disclose openings formed in outer side surfaces of both of a pair of opposed side walls, as recited in Claim 1 of the present application. Accordingly, the Applicants submit that the Black et al. reference does not disclose all of the limitations recited in Claim 1, and therefore does not anticipate Claim 1.

For the reasons set forth above, the Applicants respectfully request the withdrawal of the anticipation rejection of Claim 1 based on the Black et al. reference.

Claims 1 and 2 were rejected under 35 U.S.C. 103(a) as being unpatentable over Koseki et al. (U.S. Patent No. 6,155,886) in view of Black et al. For the reasons discussed below, the Applicants request the withdrawal of the obviousness rejection of Claims 1 and 2.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicants submit that a *prima facie* case of obviousness cannot be established in the present case because the references, either when taken singularly or in combination, fail to teach or suggest all of the limitations recited in Claim 1 of the present application.

As discussed in detail above, the Black et al. reference does not disclose openings formed in outer side surfaces of both of a pair of opposed side walls, as recited in Claim 1 of the present application. Furthermore, the Applicants submit that the Koseki et al. reference fails to teach such a feature.

The Koseki et al. reference describes an electrical connector that has walls that upwardly extend from a base thereof, and a plurality of terminals insert molded within the housing. The walls have openings (33). However, these openings (33) do not correspond to the openings recited in Claim 1 of the present application. More specifically, the openings (33) of the Koseki et al. reference are not of the type recited defined in Claim 1, since they

are not configured wherein, through each opening of the plural openings, a pair of the terminal retainer recesses adjacent to each other via one of the partition walls corresponding to the opening are opened to the exterior of housing, as recited in Claim 1. Additionally, the openings (33) of the Koseki et al. reference are not formed in *outer side surfaces* of both of a pair of *opposed* side walls, as recited in Claim 1. Furthermore, the Applicants note that the other configurations on the sides of the housing depicted in the Koseki et al. reference are not openings (see 344 in Figure 4, for example, and terminals 10, which are securely molded therein during the molding process), and certainly are not openings of the type recited in Claim 1.

Accordingly, since neither of the references, either when taken singularly or in combination, disclose or suggest openings formed in outer side surfaces of both of a pair of opposed side walls as recited in Claim 1, then the Applicants submit that a *prima facie* case of obviousness cannot be established with respect to amended Claim 1 of the present application.

For the reasons set forth above, the Applicants respectfully request the withdrawal of the obviousness rejection of Claim 1 based on the combination of the Koseki et al. reference and the Black et al. reference.

Claim 2 is considered allowable for the reasons advanced for Claim 1 from which it depends. This claim is further considered allowable as it recites other features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of Claim 1.

Claims 3-5 were rejected under 35 U.S.C. 102(b) as being anticipated by Koseki et al. For the reasons discussed below, the Applicants request the withdrawal of the anticipation rejection of Claims 3-5.

The Applicants submit that the Koseki et al. reference does not disclose each and every element as set forth in independent Claims 3 and 5, and therefore the Koseki et al. reference does not anticipate these claims.

Claim 3 advantageously recites a metal mold of injection molding comprising, among other features, plural opening-forming pins, each interposing between a pair of adjacent terminal retainer recess-forming ribs, for forming openings in a pair of opposed side walls of the housing, wherein, through each opening of the openings, a pair of the terminal retainer recesses adjacent to each other via a partition wall corresponding to the opening are opened to an exterior of housing. Claim 5 advantageously recites a method of forming a housing of an electric connector for boards, comprising, among other features, injecting synthetic resin to a metal mold, wherein the metal mold comprises opening-forming pins, each interposing between a pair of adjacent terminal retainer recess-forming ribs, for forming openings in a pair of opposed side walls of the housing; and removing the opening-forming-pins wherein, through each opening of the openings, a pair of the terminal retainer recesses adjacent to each other via a partition wall corresponding to the opening are opened to an exterior of housing. The Applicants respectfully submit that the Koseki et al. reference does not disclose all of the above features.

The Koseki et al. reference describes a method of making an electrical connector that provides an insert-molded electrical connector having terminals securely retained in a housing in order to obviate deformation and deflection of the terminals. The Official Action cites the terminals (10) for the teaching of the terminal retainer recess-forming ribs, and engaging ribs (241, 291) for the teaching of the opening-forming pins. However, the engaging ribs (241, 291) do not form openings in a pair of opposed side walls of the housing, wherein, through each opening of the openings, a pair of the terminal retainer recesses adjacent to each other via a partition wall corresponding to the opening are opened to an exterior of housing, as recited in Claims 3 and 5 of the present application. The Koseki et al. reference indicates that, in the final product, a channel (345) is defined between each pair of ribs (341) terminating at a U-shaped surface (344), as depicted in Figure 4. These channels (345) do not include an opening through which a pair of the terminal retainer recesses adjacent to each other via a partition wall corresponding to the opening are opened to an exterior of housing as is recited in the claims.

Accordingly, the Applicants submit that the Koseki et al. reference does not disclose all of the limitations recited in Claims 3 and 5, and therefore does not anticipate Claims 3 and 5. Thus, for the reasons set forth above, the Applicants respectfully request the withdrawal of the anticipation rejection of Claims 3 and 5 based on the Koseki et al. reference.

Claim 4 is considered allowable for the reasons advanced for Claim 3 from which it depends. This claim is further considered allowable as it recites other features of the

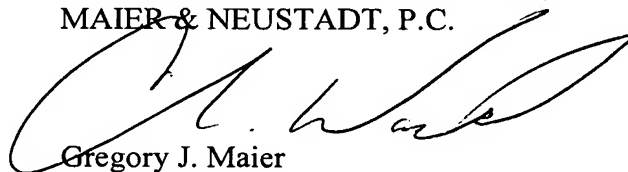
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invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of Claim 3.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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